AN INAUGURAL

DISSERTATION

ON THE

INFLUENZA:

SUBMITTED TO THE EXAMINATION OF THE

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The Truſtees and Medical Profeſſors of the Univerſity of Pennſylvania, in order to obtain the Degree of

DOCTOR OF MEDICINE,

On the Eighth Day of May A. D. 1793.

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"The explaining, correcting and confirming the obſervations of our predeceſſors is more uſeful and as honourable as hunting after new diſcoveries, of which the truly learned will find but very few, whatever the ignorant may imagine." GRANT.

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INTRODUCTION.

THE Influenza ſeems to have been known to the earlieſt medical writers whoſe works we have an opportunity of conſulting; yet, from a variety in ſome of its moſt prominent ſymptoms, it has received a great many different names, and ſometimes, been conſidered as a new diſeaſe. Among the writers from Hippocrates to Sydenham, it is generally called *Febris catarrhalis epidemica* (1); but in 1673, the latter ſuppoſes it to be a *new fever*, and names it accordingly.

It is curious to remark the regular, and conſtant pace which the ſcience of health and philoſophy have kept with each other. As long as philoſophers imagined the elements of natural bodies to be four, phyſicians ſuppoſed human bodies to conſiſt of as many humours: but as ſoon as the corpuſcular philoſophy became pretty generally received, medicine diſcovered her "acrimony, ſpiculæ, and ſalts of various ſizes (2)."

In like manner, when aſtrology took the lead of true ſcience, and people began to fancy all tereſtrial things were governed by the heavens, ſome Italian doctors found out that this diſtemper proceeded from the *influence of the ſtars*, and therefore gave it the name of INFLUENZA.

(1) Motherby's Med. Dict. under the word Influenza.
(2) Black's Hiſtory of Medicine.

Some assert that the disease now known by the name of influenza cannot be the same with that described by Sydenham, as the influenza is manifestly contagious, and the great Sydenham, a strict observer of nature, makes no mention of any such property belonging to that which he describes. Hippocrates was certainly as attentive, and as sagacious as Sydenham, yet he discovered not (what was much more easily discoverable) the circulation of the blood; a circumstance at which we justly wonder,—that it possibly could have escaped the observation of a person much less attentive, and enlightened than he who is with propriety styled the Father of the healing art. The sameness of the symptoms, however, indubitably proves the identity of the *Tussis Epidemica* and the modern influenza. Dr. Grant in a letter to Doctor de la Cour, says that he has carefully attended to the beginning, progress, and termination of the influenza, and finds upon comparison that the same has been discussed by the English Hippocrates long before, "*in as masterly a manner as the subject does admit of.*"

History of the Disease.

As a description of this distemper may be found in various publications, I shall content myself with a short account of it, as it appeared in the city of Philadelphia, in the year 1789.

The influenza made its appearance in the month of October, previous to which, and for some weeks after, the weather was dry, cool, and pleasant. It commonly set in with universal lassitude, with chills, and fever; an acute pain in the head, and eye-balls; not unfrequently a considerable itching in the eye-lids; and some had a swelling and inflammation of the eyes. There were some also who had abscesses formed in the frontal sinuses*.

* Rush's Manuscript Lectures.

A ſore throat, hoarſeneſs, and a pain in one or both ears, in ſome caſes uſhered in the diſeaſe; whilſt in others it came on with a violent ſneezing, followed by a diſcharge of acrid matter from the noſe, which often excoriated and inflamed the upper lip. In ſome caſes the noſe dropped blood, nay, in ſome it ran in ſtreams; and in one caſe related by Dr. Ruſh in his Lectures on the Theory and Practice of Phyſic (3) the diſcharge in this way amounted to twenty ounces.

Moſt perſons had a bad taſte in the mouth, attended with a want of appetite, though ſome few had their appetite preternaturally encreaſed. A ſore mouth was no uncommon attendant on this diſeaſe, and ſome had a ſevere tooth-ach, ſwelled jaws, &c. nor did the tongue entirely eſcape; for in ſome it was ſo ſwelled as to occaſion a conſiderable defect of ſpeech.

The breaſt was often affected with acute darting or flying pains; theſe ſometimes became fixed, and ſuddenly brought on, or were accompanied with a painful and laborious reſpiration. A cough univerſally attended this diſeaſe, which was ſometimes convulſive, and extremely painful; in ſome it brought on a ſpitting of blood, and two perſons died in the act of coughing*.

The ſtomach was ſometimes affected with nauſea, and vomiting, and in ſome the diſeaſe ſeemed to fall upon the bowels and was carried off with a diarrhœa—though in general the patients were either coſtive or regular.

(3) Which commenced in November 1790, at the College of Philadelphia. It is with pleaſure I embrace the preſent opportunity of acknowledging my great obligation to his valuable lecture on the influenza, for ſeveral of the particulars of its hiſtory of ſymptoms here related.

* Ruſh's Manuſcript Lectures.

The violent pains which in many perſons affected the limbs, very much reſembled the rheumatiſm ; but thoſe which were felt in the loins and thighs, were remarkably ſevere. Profuſe ſweats over the whole body very generally appeared at ſome time or other during the courſe of the diſorder, and ſometimes with obvious advantage.

The pulſe was various ; ſometimes tenſe and quick, but ſeldom full. The fever remitted about the fourth or fifth day, but the cough often continued ſeveral weeks after every other ſymptom had diſappeared (4).

The moſt remarkable circumſtances reſpecting this diſtemper were the miliary and eryſipelatous eruptions which in ſome inſtances, accompanied it, and the great tendency which the fever manifeſted to degenerate into Typhus. Although it affected perſons of both ſexes, and of all ages, it was obſerved that it ſeized few children below five years of age ; and a phyſician of this city, whoſe practice is very extenſive, aſſures me that he remarked *old people* as well as *children*, were leſs ſubject to the influenza than perſons in middle life.

Diagnoſis.

The influenza is not likely to be confounded with any diſeaſe except the common catarrh, which [though it appears with nearly the ſame ſymptoms, and like it, often ſeems to come on in conſequence of the application of cold] may be diſcriminated from it, by coming on with more cold

(4) Hippocrates in his Book of Epidemics has this paſſage, in which there is a ſtriking reſemblance of circumſtances, and ſymptoms : "Thoſe who have coughs in the winter, and eſpecially with the ſoutherly winds, are ſubject to fevers during their hawking up much thick matter ; but then they commonly ceaſe in five days. But coughs will extend to forty." Clifton's Hippocrates. Page 214.

ſhivering, by the febrile ſymptoms appearing earlier, and being more conſiderable in degree. It moreover gives a more ſudden and violent ſhock to the ſtrength, and in many inſtances produces a perpetual watching, followed by a diſorderly and uneaſy ſtate of the mind, materially different from the phrenetic delirium of the febris ardens incident to patients labouring under catarrhs from cold, or ſuch like inflammatory diſeaſes.

It is likewiſe diſtinguiſhed by its affecting more perſons at once, ſpreading over a greater extent of country in a given time, and in being [more] contagious. The influenza is ſometimes accompanied with miliary and eryſipelatous eruptions, but the catarrh from cold is not. The latter is ſlow in its advances, ſeldom giving alarm until, perhaps, long after the exiſtence of danger, whilſt the former, for the moſt part leſs dangerous, excites immediate terror, as well by the number of functions which it affects at the ſame inſtant, as by the rapidity of its progreſs; for in the influenza the tranſitions from apparently high health to ſickneſs are often, as it were, inſtantaneous.

Blood-letting, and other ſuddenly debilitating remedies were ſeldom ſo neceſſary in this diſorder as in the common catarrh, and fewer conſumptions were the conſequence of it, than might have been expected from a common cold among an equal number of perſons.

There is no diſeaſe to which the human body is liable, ſo extenſive in range, ſo ſudden in attack, ſo furious at the beginning, ſo rapid in its courſe, and at the ſame time attended with ſo little danger.

Of the Remote Cauſe.

In a tract of this kind it will probably be expected that the author ſhould enquire into the *original cauſe* of the diſeaſe on which he writes, as ſuch an eſſay is commonly ſuppoſed to exhibit the candidate's medical reſearches, as well as his medical reading. With regard to this ſubject, it may not be improper to obſerve, that it is one which has been conſidered as very abſtruſe in every age, and country where medical ſcience has been cultivated; and on which it is not only difficult what to ſay, but what to leave unſaid. Here I muſt confeſs *my* "*knowledge* dwells upon the ſurface of things(5)."

The preſent received opinion is, that this ſpecies of catarrh ariſes from contagion, which poſſibly may be true; yet to my mind it appears no eaſy matter to conceive how the diſeaſe can ſpread ſo far and wide in ſo ſhort a ſpace of time as we perceive it does, or how it can affect perſons many miles a part, at the *ſame time* where there had been no previous direct or indirect intercourſe—if *propagated only* by "a matter ariſing from the body of a man labouring under it."

Hippocrates when ſpeaking of epidemic diſeaſes in general, ſays, "when many are ſeized with the ſame diſeaſe at one time, the cauſe is chiefly to be attributed to what is moſt common and made uſe of by all. This is certainly what we inhale in inſpiration." Galen is of the ſame opinion: "For we all neither are expoſed at the ſame time to other cauſes, nor are ſubject to them at all times; but the air alone ſurrounds us all abroad, and is taken in by all in reſpiration."

That the remote cauſe of the influenza is *chiefly to be ſought for in the air,* is rendered highly probable by the

(5) Woolaſton.

following facts. Van Swieten in his comment on the 1407th aphorism of the justly admired Boerhaave, tells us upon the authority of Forestus, that a distemper, which he calls a *malignant catarrh*, "arose as it were from a certain vapour, since thick clouds of an ill smell preceded it for some days, breaking out so suddenly, that it seized almost instantly a thousand persons."

About the latter end of the year 1732, and the beginning of 1733, when epidemic catarrhs raged throughout all Europe, we are informed that the like distemper prevailed in Africa, and even persons at sea, though at an immense distance from land, were affected in the same manner(6).

The like has been observed much later: For in the year 1780, when the ship Atlas left Malacca, there was no epidemic disease in that place; yet upon her arrival at Canton, it was found that at the very same time, that the crew on board the Atlas in the China Seas had the influenza, the same disorder raged at Canton.

"On the second of May 1782, the late Admiral Kempenfelt sailed from Spithead with a squadron under his command, of which the Goliah was one, whose crew was attacked with the influenza on the 29th of that month; the rest were affected at different times; and so many of the men were rendered incapable of duty by this prevailing sickness, that the whole squadron was obliged to return into port about the second week in June, *not having had communication with any shore*, and having *cruized solely* between Brest and the Lizard."

(6) Memoirs pour servir a l'histoire des Insectes, par Reaumur, Page 435.

About the ſixth of May, Lord Howe ſailed for the Dutch coaſt, with a large fleet under his command; *all were in perfect health;* towards the end of May the diſorder firſt appeared in the Rippon, and in two days after in the Princeſs Amelia. Other ſhips of the ſame fleet were affected with it at different periods; ſome indeed not until their return to Portſmouth about the ſecond week in June. *This fleet alſo had no communication with the ſhore until their return to the Downs,* on their way back to Portſmouth, towards the third or fourth of June(7).

To theſe facts the following paſſage from the late celebrated Doctor Cullen, ſeems ſomewhat oppoſed: This diſeaſe "has ſeldom appeared in one country of Europe, without appearing *ſucceſſively* in every other part of it; and, in ſome inſtances has been even (8) *transferred* to America, and has been ſpread over that continent, as far as we have had opportunities of being informed(9)."

From whence the doctor obtained his information I know not; but, as he has not mentioned a ſingle circumſtance whereby a perſon might be enabled to judge of the *accuracy* of it, and as there are objections to the probability of his information being ſo accurate as to ſatisfy us that the diſeaſe was transferred in the manner he ſuppoſes, I am obliged to conſider this paſſage as an aſſertion not fully ſupported, either by concomitant circumſtances, or ſubſequent obſervations; though, at the ſame time, I acknowledge it to be the aſſertion of a very reſpectable, of a very eminent phyſician. But from the

(7) Lond. Med. Trans. Vol. 3. Page 61.

(8) In the year 1782, the influenza appeared at London between the 12th and 18th, at Oxford in the third week, and at Edinburgh on the 20th day of May. Could the diſeaſe have been *transferred* to theſe three cities in ſuch quick *ſucceſſion*, by things imbued with the contagion, or by perſons labouring under the complaint! But more of this hereafter.

(9) Cullen's Firſt Lines, Vol. 3. Page 104.

nature of things, his information in its full extent, could not have amounted to more than—that the diſeaſe was later in appearing in ſome parts of Europe than in others; and that it was not only later in appearing in America, than in ſome parts of Europe, but that the inhabitants of that *amazingly extenſive continent* were not affected with it *all at once*. Now what can this prove? That the diſeaſe is propagated only by contagion?—Surely not. But granting all that the Doctor has aſſerted to be matter of fact, that the diſeaſe has appeared in every part of Europe *ſucceſſively*, and has been *transferred to America*; will this enable us to account for the appearing of it in the Iſland of Bourbon, ſituate in Africa, at the identical time that it raged in Europe; or explain in what manner it broke out at the ſame time among perſons at ſea and on land, where thoſe at ſea had not even the ſmalleſt communication either with thoſe on land, or with any other perſon whatever? We muſt either *deny* the truth of theſe facts (10), or admit that the diſeaſe is not

(10) The Author had not an opportunity of conſulting the firſt volume of the Medical Communications on the ſubject of the Influenza until ſeveral months after this eſſay had been prepared for the preſs; and his ſurpriſe was not a little upon reading it, as he there found an anticipation of ſeveral obſervations which he ſuppoſed had firſt occurred to himſelf. But notwithſtanding he conceives that much gratitude is due the ſociety for their generous exertions in favour of the healing art, that the deſign of the work is laudable, and that the publication contains a vaſt collection of valuable information reſpecting this wonderful epidemic;—yet cannot help obſerving that the following part of the "Account of the Epidemic Catarrh, of the year 1782," appears exceptionable, in as much as it oppoſes opinion to matter of fact, and ſubſtitutes aſſertion in the room of argument:

"It is *credibly affirmed*, that the crews of ſeveral ſhips were ſeized with the Influenza many miles diſtant from land, and came into various ports of England labouring under it; the ſame thing is ſaid to have happened to ſhips in the Eaſt-Indies, and other parts. A want of preciſion, or of authentication reſpecting the circumſtances above alluded to, makes it improper to draw any inferences from them". (12)

That the facts are preciſe will immediately appear upon re-

(12) Ibid. Page 65.

always induced by contagion, according to the common acceptation of that word; that is, the diſeaſe cannot in theſe inſtances, be ſuppoſed to have been propagated by perſonal communication (11).

ferring to them, and if *credibly affirmed*, wherefore is it improper to draw any inferences from them! This may be a convenient way of getting over objections which militate againſt pre-conceived and favourite opinions; but fortunately for ſcience, this mode of *barely denying facts*, is very unſucceſsful in producing conviction or of eſtabliſhing doctrines, in the preſent ſtate of medical philoſophy. Before we were denied the privilege of inferring from them, it would have been proper to have *ſhewn* that they were not *preciſe*, or *authentic*, or that they *did not apply*. But without even attempting to do this, the compiler endeavours to elude their force by ſuggeſting diſtruſt; not by argument, but by telling us that "without pretending to deny the truth of them, the following Anecdote will ſerve to ſhew that *great caution* is requiſite before they are admitted."

"Mr. Henry of Mancheſter, informed the ſociety, from what he thought good authority, that a ſhip from the Weſt-Indies to Liverpool, was by ſtreſs of weather driven out of her proper courſe, into a higher north latitude, where her whole crew were ſeized with the influenza; but wiſhing afterwards for more acurate information on the ſubject, he wrote to Doctor Currie of Liverpool, deſiring him to make every neceſſary inquiry into the matter; that gentleman, who took great pains to inveſtigate the affair, at laſt met with the ſurgeon of the veſſel, from whom he learnt that before the crew were ſeized with the diſorder, they had been off the North of Ireland, and had ſome communication with the inhabitants of thoſe parts."

May we not aſk if this anecdote proves *any thing in point?* Is it preciſe? At what time did this communication take place; in the winter, ſpring, ſummer, or autumn, and in what year? Were the perſons with whom the communication was had, then labouring under the diſeaſe; or was it *then prevalent in that part of Ireland?* This anecdote, which was intended to excite in us a diſtruſt of the truth of the facts before alluded to, proves nothing except its own want of *preciſion*, and *deficient authentication of circumſtances*. For unleſs it had been *ſhewn* that the diſeaſe prevailed among the inhabitants with whom the crew had this communication prior to, or at that time, the fact only goes to ſhew that ſuch a communication took place, and ſubſequent to that the influenza appeared on board the veſſel. But ſuppoſing that Mr. Henry was at firſt miſtaken, and that the crew were infected by the inhabitants as the anecdote *indirectly* ſuggeſts, this ſuppoſition can in no wiſe affect the authenticity either of the facts before mentioned, or of any other facts whatever.

(11) "But the greateſt number concurred in opinion, that

The foregoing fact reſpecting the co-incident appearance of the Epidemic Catarrh in Africa and Europe, firſt mentioned by Reaumur [who derived his informration from the letters of Caſſini] is quoted by Van Swieten, in his chapter on Epidemic diſeaſes, and muſt have been known to Doctor Cullen, who was unqueſtionably, well acquainted with the writings of that *great man*. My own obſervations, as far as they have gone, are perfectly conſonant with this fact; nor can I conceive why the influenza might not ariſe as ſpontaneouſly in America, as in Europe, and *there* as readily as in the iſland of Bourbon. The *Morbific matter exciting the diſeaſe* muſt have originated at *ſometime*, and *ſomewhere;* and a cauſe like to that which gave riſe to it in any one country, at any one point of time, might produce it in another country at the ſame time, under ſimilar circumſtances.

It may be objected, that the diſeaſe could not have ariſen from the air, becauſe the countries here mentioned muſt experience at any particular time, very different ſtates of that element. This argument may be allowed to have ſome weight againſt the ſuppoſition of its ariſing *entirely* from the *ſenſible qualities* of the air, but *extremely little* againſt the probability of its taking birth " from ſome inexplicable variety of exhalations contained in it, which mixing with our fluids, or by their ſtimulus diſorder our bodies (13)." This was the opinion of the deſervedly celebrated Herman Boerhaave reſpecting epidemics in general, and, as far as I have been able to diſcover, it has not been overturned *by fair argument*, or ſubſequent obſervation, at leaſt as far it applies to the epidemic catarrh. This indeed was not the opinion of Boer-

the influenza was contagious, in the common acceptation of that word, that is to ſay, that it was conveyed and propagated by the contact, or at leaſt by the ſufficiently near approach, of an affected perſon." Med. Commun. Vol. I. Page 46.

(13) Aphoriſm 1408.

haave alone; but alſo of moſt of thoſe phyſicians who were famous for their aſſiduous attention to the true ſource of medical knowledge, the operations of nature. The antients 'tis true, were ſometimes miſtaken, although they ſtudied nature; and the moderns are not, perhaps, leſs frequently wrong in their opinions, notwithſtanding the immenſity of their diſcoveries; not becauſe they do not ſtudy nature at all, and ſtudy books alone; but chiefly becauſe they ſtudy her either too much through the medium of books and preconceived Hypotheſes, or with a view to propagate *ſomething new*.

And this is one great reaſon why we ſhould ſeldom read the modern ſyſtems of phyſic, unleſs well armed with " a great deal of ſcepticiſm on the ſubject." We may, and indeed we ought to eſteem ſome few of the writings, and opinions of the modern authors, and, with no impropriety, entertain a modeſt confidence in our own talents for obſervation; yet it would be well not to overlook or deſpiſe the *medical records of nature* as handed down to us by the antients; for in theſe there are certainly many uſeful remarks which appear to be at preſent forgotten. Doctor Cullen made war upon the antients, and, unfortunately for our art, with too much ſucceſs; for he not only delivered his pupils from the undue influence of great names, and ſcrutinized the writings of his predeceſſors with great freedom, but contributed much to render the reading as well as quoting the antient authors unfaſhionable. He expoſed ſome of the errors of thehumoral pathology, but was perhaps not always equally happy in ſubſtituting truth in the room of them. The deſire of being the diſcoverer of *ſomething new*, and of being thought wiſer than our forefathers, has perhaps, in ſome inſtances led to the advancement of uſeful knowledge; but it has often proved the very hot-bed of error, and warped the judgment of perſons the moſt ingenuous and enlightened.

Many diſeaſes evidently owe their birth to the ſenſible qualities of the air, " for with the ſeaſons, the conſtitutions of men likewiſe change (14);" and though ſome of theſe do no not become epidemic, yet many of thoſe which do, only become ſo in conſequence of ſuch ſenſible qualities. Ruſſel in his learned treatiſe on the plague, ſays, that without the concurrence of a peſtilential ſtate of air, the contagion of that diſeaſe when imported, even in Turkey, does not ſpread.

Did the influenza depend upon a *ſpecific contagion* it muſt *always exiſt*, or we cannot poſſibly aſcribe it to ſuch a cauſe. The ſmall pox, the venereal diſeaſe, &c. never intermit; but the influenza has become extinct, and again broke forth upon the world after a period of of more than four-ſcore years (15).

I do not aſſert, nor do I wiſh to be underſtood to mean, that the influenza is not at all contagious: On the con-

(14) Clifton's Hippocrates, Page 3.—Sydenham ſays Epidemics are admitted or excluded as the ſenſible qualities of the air favour or oppoſe them. On the ſame ſubject conſult Fordyce on fevers, page 19, &c. Moiſture with heat, and ſudden changes from hot to cold, by raiſing much putrid vapour affects the elaſticity of the fibres, deſtroys the fire and vivid circulation of the blood, and diſſolves the humours beyond what a healthy ſtate admits. At the very time the ſurface of the body requires the freeſt perſpiration, the heat of the air makes the proper quantity of cloathing irkſome to inconſiderate people; from whence it happens that the moſt putrid effluvia, which ſhould paſs through the pores of the ſkin, are checked, grow cauſtic, and mix with the blood, while due care is not taken to preſerve the juices from corruption by an antiſeptic regimen; and, when they are corrupted, ſufficient regulations are not obſerved for carrying off the diſorder, with efficacy or diſpatch, by either proper cloathing, detergent medicines, or a ſuitable diet, &c."

(15) It is recorded that a ſimilar diſeaſe appeared in 1510, 1557, 1580, 1587, 1591, 1675, 1709, in the latter end of 1732 and in the beginning of 1733, in 1743, 1762, 1767, 1775, 1782, and in 1789. See Lond. Med. Trans. Vol. 3. Page 77.

trary, I am poſſeſſed of facts (16) which prove in the moſt inconteſtible manner, that it may be, and often is propagated from one perſon to another by means of contagion. But I mean, and the arguments which I have adduced, I truſt, will warrant the concluſion, that the diſeaſe often does ariſe from "*ſome vicious quality of the air* (17)" or exhalation in it, as well as from a matter ariſing from the body of a man labouring under diſeaſe (18).

Conſidering the ſubject in this light, we ſhall be enabled to account for the progreſſive virulence (19) ſometimes obſervable in this epidemic, without any manifeſt alteration in the ſenſible qualities of the air. The "*vi-*

(16) The following communication I received of Doctor Leib my preceptor in medicine: "In the year 1782, when the influenza, ravaged the ſea coaſts of Europe, the ſhip I was on board of captured a Spaniſh brig which had been taken by a privateer belonging to the Britiſh with whom we were then at war. All the crew on board the brig had the influenza, and we had ſcarcely caſt anchor in the harbour of L' Orient, which was in a few days after the capture, before the greater part of the ſhip's crew were ſeized with the diſeaſe, and myſelf among the number."

(17) Hildanus ſuppoſed the cauſe of the Plague at Lauſanne, and the neighbouring diſtricts was not only contagion, but alſo *ſome vicious quality of the air*. For, ſays he, "the huts of the peaſants and poor people were not exempt from the plague, though ſituated on the higheſt mountains, and at a diſtance from each other, and the peaſants kept not the leaſt intercourſe with one another."

(18) "In ſome inſtances it was obſerved that the influenza did not ſhew itſelf in certain places until ſome one or more arrived at thoſe places either actually labouring under the diſeaſe, or coming immediately from other places, whoſe inhabitants had been affected by it for ſome days: while, in other inſtances, very attentive and intelligent obſervers could not trace any communication between the families firſt attacked in the towns in which they reſided, and other places, where the diſeaſe had previouſly appeared." Lond. Med. Trans. Vol. 3. Page 60.

(19) "It was alſo remarked that thoſe who were attacked later from the time of the appearance of the diſorder, commonly had it more ſeverely, and were longer ill, &c. Med. Commun. Vol. I. Page 24.

vious quality" of it conſpires with, and greatly aſſiſts the effluvia iſſuing from the ſick, to encreaſe the malignancy of this diſtemper.

Of the Prediſpoſing Cauſe.

The venerable Galen judiciouſly remarks, "*that no cauſe can affect without a prediſpoſition of the body*(20): otherwiſe all who are expoſed to the rays of a ſummer ſun would be ſeized with fevers, as well as thoſe who uſe too much exerciſe, are paſſionate, or grieved. Moreover, all would fall ſick during the dog-days, or die of the plague." This is a circumſtance which requires very little proof to be admitted as true, the obſervation of every body ſupplying innumerable facts in its ſupport. I ſhall therefore adduce but a few, nor ſhould theſe be mentioned, but to combat the only argument of any importance which has been advanced againſt the idea of the remote cauſe of the influenza reſiding in the air.

Baron De Tott, in his Memoirs, informs us, that "the plague, which that year carried off a hundred and fifty thouſand perſons, in Conſtantinople, was then at its height. Obliged (ſays he) to direct the workmen myſelf, many of whom were attacked by the diſtemper, I had nothing to preſerve me from it, but the ſalubrious ſmell of the forges, and the precaution of giving directions with the end of my cane. But, perhaps, what moſt preſerved me from the infection was my never giving myſelf up to fear, and the melancholy ideas of its ravages preſent(21)."

(20) See a note by Doctor Rotherham in Cullen's Firſt lines, Vol. I. Page 52. "The prediſpoſing is that which renders the body liable or capable of being affected by diſeaſe when the exciting cauſe is applied."

(21) Volume the ſecond, Page the 83.

I have chosen this fact from amongst the multitude which might be brought forward, first, because the plague is the monarch of all diseases, the most highly contagious of any which afflict the human species; and, secondly, because the Baron here relates a matter of fact, without regard to any particular theory in medicine. He was not preserved from the disease, as he supposes, by the *salubrious smell of the forges*, for that was as common to the workmen who were seized with the plague as it was to him; nor was he preserved by the precautions which he observed in giving directions, so short a distance as the length of his cane (22) was certainly within the sphere of the activity of the infection. 'Tis true, Doctor Cullen is of opinion, that persons may be preserved from the contagion of the plague, by avoiding all near communication with the sick, or their goods, and "that it is probable, a small distance will answer the purpose, if, at the same time, there be no stream of air to carry the effluvia of persons, or their goods to some distance." It cannot, however, be imagined but that during the Baron's continuance at this place [which was a very considerable time] the wind blew perhaps, in every direction; that, therefore, he must many times have been exposed to a "*stream of air*" passing over the bodies and goods of persons tainted with the pestilence, and that he was not preserved from the infectious miasmata either by the smell of the forges, or by giving directions with the end of his cane; but by, what is more probable, his active life in which body and mind were vigorously employed, by his strict observance of temperance, and, by his never giving himself up to the debilitating influence of fear.

(22) The effluvia arising from the diseased, received into the ambient air, form a pestiferous atmosphere, more or less impregnated with these effluvia, as it recedes from their source. That contagion is thus communicated in the chambers of the sick, appears from persons being infected without touching the diseased body, or any thing in the room that may be supposed to harbour the infection." Russel on the Plague, Page 298.

In the fall of 1789, the influenza was very prevalent in the city of Philadelphia and its vicinity, and perhaps in many other parts of America. At that time I was ſeized with it myſelf, and was ſo ill as to be confined to bed for two days, nevertheleſs, the remainder of the family, which conſiſted of ſix perſons of different ages, and of both ſexes, entirely eſcaped every ſymptom of the diſeaſe(23).

Patrick Ruſſel, who reſided many years at Aleppo, and who conſequently had the beſt opportunity of *ſeeing*, and *knowing* what he relates, ſays, that "ſome expoſed every way to the infection [of the plague] as if invulnerable, remain ſound the whole ſeaſon(24)." I am therefore decidedly of opinion with Doctor Cullen, that even "the moſt *powerful contagions* do not operate, but when the bodies of men expoſed to the contagion are in certain circumſtances, which render them more liable to be affected by it, or when certain cauſes concur to excite the power of it(25)." May we not, then, ſafely conclude that there is required a certain ſtate of the ſyſtem favourable to the action of the remote cauſe, to render it capable of receiving the infection; and that this remote cauſe of the influenza may *exiſt in the air*, and yet every perſon ſhall not be affected with this epidemic at the ſame time, as the prediſpoſed ſtate of the ſyſtem may not be preſent in every perſon at this particular time(26)."

(22) "To others, and thoſe numerous, it was ſo favourable as only to attack very few in each family." Lond. Med. Trans. Vol. 3. Page 59.

(24) Page 305.

(25) Firſt Lines, Volume the ſecond, Page 246.

(26) "If the cauſe lay in the air all muſt have been ſeized at once,"—but as this was not found to be the caſe, and as the diſeaſe appeared at different periods in different towns and villages, Doctor Hamilton infers that the cauſe was contagion. But this is inferring too much; for even from his own account of Harpenden, Luton, and St. Albans it appears that at the firſt

The ſtate of the ſyſtem which is *neceſſary* to the formation of the diſeaſe may be inferred from the ſymptoms with which it is accompanied, particularly that "proſtration of ſtrength, and impaired vigour in all the functions of the body(27)," which almoſt always attend it. The predisponent cauſes of catarrhs in general tend likewiſe to deſignate it as a ſtate of *more or leſs debility*. Theſe cauſes, according to Cullen, are weakneſs of the ſyſtem, and particularly the leſſened vigour of the circulation, occaſioned by faſting, by evacuations, by fatigue, by a laſt night's debauch, by exceſs in venery, by long watching, by much ſtudy, &c. &c(28).

The influenza being contagious furniſhes additional proof. "The bodies of men [ſays the laſt mentioned author] are eſpecially liable to be affected by contagions, when they are any ways conſiderably weakened by want of food, and even by a ſcanty diet, or one of little nouriſhment; by intemperance in drinking, which, when the ſtupor of intoxication is over, leaves the body in a weakened ſtate, &c. &c.(29)

But the following caſes related by Doctor Hamilton, clearly develope this matter, and very ſatisfactorily prove that previous debility is abſolutely neceſſary to the admiſſion and formation of the diſeaſe. "A boy of about

of theſe places, though it is half way between the two latter, and ſeveral miles nearer London than St. Albans, the influenza ſhewed itſelf later than in either of the other two places. The manner in which he accounts for this difference of attack in point of time in theſe villages, forcibly applies in ſupport of the doctrine which he wiſhes to explode. He informs us that Harpenden is on an eminence, the ſoil of a light dry nature, when compared to the others; and from hence, with great propriety concludes that the difference ariſes from "*its ſituation favouring leſs its exciting and prediſpoſing cauſe.*"

(27) Currie's account of the diſeaſes of America, Page 102.
(28) Firſt Lines, Volume the firſt, Page 134. And,
(29) At page 246, of the ſecond Volume.

twelve years of age, of a ſtirring diſpoſition, ſuffered ſeverely; yet eſcaped the diſeaſe, though the reſt of the family had been ill ſome time, till after bathing with other boys in a river, and *remaining there longer than prudent*, when he was ſeized the next day with the influenza. We may add to this, that he was a valetudinarian for a long time before, but had lately overcome in a great meaſure all his complaints."

"A young gentleman at Luton [continues the ſame author], about twenty-three, of a volatile turn, and *lately a valetudinarian*, but who, for eight or ten weeks had ſo far recovered, as to be able to follow his amuſements, and who, for this purpoſe, generally walked or rode, whether the weather was favourable or not, ſeveral hours a day, often at the ſame time indulging himſelf freely in the glaſs, *was at laſt* ſeized with the epidemic, and ſuffered ſeverely(30)."

Of the Exciting Cauſe.

As truth is the object of which I am in ſearch, and *not the purſuit of fame for new diſcoveries*, permit me once more to quote a paſſage from the great commentator of Hippocrates: "In our bodies, as it were prepared for diſeaſe, *ſome external adventitious circumſtance kindles a fever*, which of itſelf would not generate a violent diſeaſe, yet from the diſpoſition of the body, every one of theſe is rendered, not the cauſe of the diſeaſe but the

(30) Doctor Hamilton after mentioning that ſoldiers ſuffered much from the influenza, owing to their irregular living, light cloathing, &c. &c. adds—"The delicate alſo, and the valetudinarian, in all my obſervations were great ſufferers, and ſtill greater in proportion as they were expoſed to the viciſſitudes of the weather." See Lond. Med. Memoirs from Page 432 to 438.

occaſion(31)." The exciting or occaſional cauſe of the influenza muſt therefore be that external circumſtance which kindles the fever, to wit, the morbid miaſma, or contagion which has been conſidered under the general head of the *remote cauſe;* though ſtrictly ſpeaking, the remote cauſe includes both the exciting and prediſpoſing cauſes(32).

The Proximate Cauſe

Of every diſeaſe is that which immediately produces it, and whoſe removal effectuates the cure(33). The proximate cauſe of the influenza is nearly the ſame as that of a common catarrh from cold, as appears by the ſimilarity of their ſymptoms, which differ only in *degree*. According to Dr. Cullen, " the proximate cauſe of catarrh (whether from cold or contagion) ſeems to be an increaſed afflux of fluids to the mucous membrane of the noſe, fauces, and bronchiæ, along with *ſome degree of inflammation affecting theſe parts*. The latter circumſtance, ſays he, is confirmed by the appearance of the blood;" and it is this latter circumſtance, viz. the degree of inflammation affecting theſe parts, which appears to me to be the proximate cauſe itſelf, and the increaſed afflux of fluids, a conſequence of that inflammation(34).

(31) See a note by Doctor Rotherham quoted at page 17. " No diſeaſe can exiſt without an occaſional cauſe; yet it is neceſſary, that at the ſame time, the ſtate of the body be ſuch as to admit that cauſe to take effect, or act."

(32) " Remote cauſes are of two kinds, viz. the prediſpoſing and exciting, or as it is ſometimes called the occaſional." ibid.

(33) See the note above quoted—and Van Swieten's Commentaries, Vol. 1. Page 21—" A diſeaſe as an adequate effect, is the ſame with its complete or proximate cauſe, the preſence of which ſuppoſes the diſeaſe, and the abſence its removal."

(34) At our meals the membrana pituitaria is frequently irritated by ſharp muſtard, ſo as to cauſe the noſe to run water; yet who, in this caſe, would aſſert that the proximate cauſe of this temporary complaint was an increaſed afflux of fluids to this membrane? Is not the *irritation* of this membrane the

It is unphilosophic to admit more causes than are absolutely necessary to explain the phenomenon; and equally so to assign that as a cause which is only an effect. Is it not also, unphilosophic to combine a cause and its effect, and assign the combination as a cause?

How is a secreting or exhaling surface induced to discharge a preternatural quantity of a fluid? Is it not, either by some power which determines to that surface, or by some affection of the surface itself? What shall we then suppose to be the proximate cause of this preternatural secretion or exhalation? Without doubt the *power* which determines to that surface, or some affection of it, whereby it is compelled to secrete, or pour out in unusual quantity, and not the afflux of fluids to it. *Remove the cause*, and the *effect ceases*, is an axiom as old as philosophy itself, and happily applies to the present case. If we remove the extra-power which determines an unusual flux to the secreting or exhaling surface, it will perform its office in the ordinary manner; nor will the same effect fail to take place upon removing the affection of this surface whereby it was constrained to secrete or exhale preternaturally. In the influenza, the power which constrains or compels preternatural secretion or exhalation [for it matters not which], is nothing else than an inflammatory affection of such a surface(35).

In that kind of gonorrhæa, which is brought on by venereal infection, Doctor Cullen observes, that the chief thing to be attended to is the *inflamed state of the ure-*

proximate cause? This is what we first attempt to remove, and which we never fail to effect, by inhaling through the nostrils the grateful effluvia of a piece of wheaten bread. Is not this *a case perfectly in point?*

(35) "More fluid circulates through, and is secreted, in a part that is inflamed, than when it is in a natural state." Motherby's Medical Dictionary, under the word Inflammatio.

thra," a circumſtance which is not only *inſeparable* from the diſeaſe, but "*occaſions all the troubleſome ſymptoms that ever attend it.*

Swediaur, in his excellent treatiſe on the venereal diſeaſe, calls the gonorrhæa virulenta, a *local inflammation* of the urethra in men, and of the vagina in women, the diſcharge being only the mucus uſually ſecreted in preternatural quantity, ſomewhat changed in colour and conſiſtence by the ſtimulus applied to theſe parts; and in expreſs terms, ſays *it is like the diſcharge from the noſe and lungs, on taking cold, where the mucus aſſumes nearly the ſame appearance.*

It has already been remarked, that the proximate cauſe and ſymptoms in general of a catarrh from cold, and thoſe of the influenza, were very nearly, if not altogether the ſame [except in degree]; which may lead us to conclude, that as an inflammation of the lining of the urethra brings on a preternatural diſcharge of mucus from thence, altered in colour and conſiſtence; ſo, in the influenza, a like affection of the membrane lining the noſe, fauces, and bronchiæ [being a ſimilar ſecreting ſurface] will be productive of a reſembling diſcharge.

A certain degree of inflammation favours a copious flow of mucus from the urethra, and a yet higher inflammation will ſuppreſs the running entirely, bringing on ſevere pains in different parts of the body, with an increaſed action of the heart and arteries. The like is obſervable in catarrhs, where a certain degree of inflammation excites a free diſcharge from the noſe, fauces, and bronchiæ; whilſt an increaſed inflammation of the internal ſurface of theſe parts not only ſuppreſſes ſecretion there, but is followed by a ſenſe of fullneſs in one or both noſtrils, dyſp-

nœa ſicca, and a quickened pulſe (36). This laſt, viz. the febrile action of the arterial ſyſtem, is a natural conſequence of inflammation in theſe parts; for, as F. Hoffman obſerves, and after him Doctor Fordyce, " any ſuch impediment to the freer circulation of the blood, as deſtroys its equilibrium, is the eſſential character of a fever(37)." That increaſed inflammation produces ſuch effects, is confirmed by uniform experience, as may frequently be ſeen in the patients affected with gonorrhœa, who uſe too aſtringent injections; for in this caſe they have the running checked, with an aggravation of every inflammatory ſymptom, ſeldom failing to bring on inflammatio teſtium, cyſtitis, or both, and an immenſe accumulation of miſery.

Sydenham remarks, when treating of the epidemic fever and cough of 1675, that it "frequently proved very fatal to abundance of the common people, who, whilſt they unadviſedly endeavoured to check the cough by taking *burnt brandy*, and *other hot liquors*, occaſioned pleuritic or peripneumonic diſorders; and by this irrational procedure rendered this diſeaſe dangerous, and often mortal, which of its own nature is ſlight, and eaſily curable." But it ſometimes happened (continues he), not only when the diſeaſe had been unſkilfully treated, in the manner above deſcribed, but alſo ſpontaneouſly, at the beginning of the illneſs, or in a day or two afterwards, eſpecially in *tender and weakly perſons*, that the cough was ſucceeded by alternate intervals of heat and cold, a pain in the head, back, and limbs, and ſometimes a tendency to ſweat, eſpecially in the night; all which ſymptoms generally followed the fever of this conſtitution, as it were of the lungs, *which occaſioned a difficulty of breathing, ſtopped the cough, and increaſed the fever.*"

(36) " A fever accompanies every inflammation." Van Swieten's Comment. Vol. 5. Page 81.

(37) Fordyce on fevers, Page 14.

The obvious tendency of "burnt brandy and other hot liquors," taken down in such cases, would be to increase an inflammation already begun; to stop the cough, or at least the execretion of mucus from the lining of the bronchiæ; to produce difficult respiration from the swelling of the inflamed membrane; and, an unavoidable effect the foregoing, increased fever.

The manner in which the disease must *necessarily* originate, will likewise shew that these symptoms arise from the proximate cause here laid down; and that the degree of this accounts for every variety observable in the influenza. For, whether the *morbid miasmata* which constitute the exciting cause, be emitted from the body of one who has the disease, or be engendered in the atmosphere, or exhaled into it from putrifying substances, animal or vegetable, or in short, in whatever manner they may get there—it cannot be questioned, but that they *float in that element* (38), and enter with it in inspiration and deglutition; and being retained by the tenacious mucus of the nose, fauces, lungs, stomach, and intestines, irritate and inflame these parts, thereby producing in the first instance, or secondarily, the train of symptoms which

(38) "We have many examples to prove, that the air cannot hold, nor yet convey contagion to any distance. If it be mixed with atmospheric air, it is soon dissipated, perhaps chemically decomposed, if it be a compound body [*possibly he would have been nearer the truth had he said recompounded, or neutralized*], and its nature altogether changed." Lond. Med. Mem. Vol. 2. Page 439. Upon first reading this passage, I doubted whether the author meant seriously, as it appeared to me to be trifling, if not with *common sense*, at least with *common experience*, and with the testimony of some of the greatest authorities in medicine. See the quotations from Hildanus, Russel, &c. at pages 16 and 18—"It is well known, the stench of putrid carcases, gangrened limbs, the polluted stinking air of jails, &c. bring on malignant pestilential fevers, just as the putrid sanies of a gangrened limb, absorbed into the blood, brings on a fever of the same kind." Huxham on fevers, page 243. See likewise on the same subject, Ferriar's Med. Essays, p. 236.

take place in this diſeaſe. Doctor Houlſton of Liverpool, goes ſo far as to aſſure us, "that in ſitting near an infected perſon, an irritation of the mucous membrane of the noſe, was ſenſible, ſuch as is produced by the duſt of pepper, and which ſneezing tended to remove.(39)."

Now, though it ſeems *almoſt certain* that the virus of every diſeaſe which is contagious, affects the part on which it has firſt faſtened, before it diſturbs the reſt of the body, and aſſimilates to itſelf more or leſs of the humours which it there meets with; yet it would ſeem *poſſible* that ſome of it might be abſorbed, and immediately taken into the circulation [in perſons of lax habits], and there excite or increaſe a fever by its own ſtimulus, or by the ſtimulus of ſuch part of the blood as it aſſimilates to its own nature(40). But, for my own part, I ſhould ſuppoſe it a *rare occurrence in the influenza*, that the *materies morbi*," in the firſt inſtance, enters the maſs of blood

(39) Med. Commun. Vol. I. Page 57. See alſo James's Med. Dictionary under the word Catarrh. "But it is not to be doubted, that there is ſometimes in the air ſuch a *ſubtile cauſtic matter* which, being received in inſpiration, inſinuates itſelf into the glandulous parts, through which it paſſes, excites pain, tumor, and redneſs, and brings on a catarrhous fever." What this ſubtile cauſtic matter is *eſſentially*, may no doubt be very difficult to explain; but from analogy it would ſeem probable that it is the ſame with that which produces the plague, the jail or hoſpital fever, and, peradventure, an intermittent: and that the various appearances of theſe (ſeemingly different) diſeaſes ariſe from the greater or leſs concentration of this *matter*, together with the accidental, though greatly diverſifying circumſtances of ſeaſon, ſoil, cultivation, climate, &c. and alſo the manner of living, food, raiment, &c. &c. According to Dr. William Fordyce, "if animal bodies are in a decaying ſtate, and the air be filled with their ſteams, they ſometimes produce *peſtilential fevers*; the ſteams of ſome decayed vegetables have the ſame effect. The effluvia of human bodies are likewiſe very hurtful to the air. Three thouſand men living within the compaſs of an acre of ground would make an atmoſphere of their own ſteams ſeventy-one feet high, which would ſoon become peſtilential, without the winds to diſpel it. The air of priſons for this reaſon produces mortal fevers." See his Inquiry into the cauſes, &c. of fevers, page 16.

(40) See Ferriar's Med. Eſſays, page 235.

without exciting a *local affection;* but as there are ſaid to be ſome caſes where the patients are inſtantaneouſly ſeized with, and exhibit all the other ſymptoms of the diſeaſe, we may, perhaps admit that in thoſe caſes, the local affection may not be preſent. However, ſuch caſes have *never* fallen under my obſervation(41).

Upon the whole, therefore, the proximate cauſe of the influenza appears to be a local inflammation of one, or more of the parts before mentioned, viz. of the mucous membrane lining the noſe, fauces, aſpera arteria, œſophagus, &c. &c.(42)

Of the Cure.

So moderate is the influenza in many inſtances, as to require but a few days refraining from the uſe of animal food, to lay in bed or keep within doors, taking at the ſame time ſome warm diluent drink, and to return gradually to the uſual manner of living; whilſt in others, again, great attention is abſolutely neceſſary, and the cure difficult.

The treatment of this diſorder muſt be either *local*, or *general*, or *both*; as will appear by attending to its hiſtory of ſymptoms, and its remote and proximate cauſes: But as moſt local remedies produce general effects,

(41) "I believe contagious miaſmata ſeldom, if ever, produce their effects by entering the vaſa inhalantia on the ſurface of the body where the cuticle is not removed. I apprehend they more commonly make their way by the primæ viæ, the lungs, or other external paſſages; &c. &c."

Dr. Kirkland.

(42) "Some inflammation I will allow, ſays Doctor Hamilton, *the ſtate of the mucous membrane* proved that there was a *degree of it preſent.*" Lond. Med. Mem. Vol. 2. page 456. After enumerating certain remedies which he uſed, adds—"with a linctus to mitigate the *burning heat and pain* I felt in my throat;" from which one would think the *degree of inflammation* in his own caſe was not very inconſiderable.

and general ones often relieve particular parts, it may be moſt proper to omit diſtinctions of this kind, and premiſe one *univerſal rule* by which the indications of cure are to be governed, viz. *The ſeaſon of the year, the ſtate of the ſyſtem,* and *the ſymptoms preſent.*

1. BLOOD-LETTING is a proper and ſpeedy remedy to take down the phlogiſtic diatheſis, and may be either partial or general, according as the ſymptoms indicate. The pulſe, though it may aſſiſt in determining the quantity of blood which ſhould be drawn, and the *frequency* of the operation, it can by no means be allowed to direct us altogether in the uſe of this valuable remedy(43). From the great diſpoſition which this fever diſcovered to degenerate into Typhus(44), we ſhould be cautious in the uſe of the lancet, and all things elſe being equal, bleed leſs freely in the ſpring than in the fall of the year.

2. CATHARTICS, or purging medicines, are no doubt neceſſary, particularly if the patient be afflicted with a violent head-ach, a throbbing of the temporal arteries, much cough, conſtipation of the bowels, accompanied with a tenſe pulſe: but as medicines of this kind debilitate the ſyſtem conſiderably by a *ſingle operation,* if

(43) "Where there is juſt reaſon to fear a contagious malignity in a fever, we ſhould proceed with the utmoſt caution as to repeated bleeding." Huxham on fevers, page 238. See the 1ſt vol. of the Med. Commun. p. 75. Notwithſtanding this epidemic [the influenza of 1789] *was viſibly of an inflammatory kind,* it would not with us, admit of what is called the antiphlogiſtic plan." Currie on the Diſeaſes of America, page 323: and at page 103, "Several were benefited by bleeding; but in general the patients recovered ſooner when it was omitted, except when pneumonic ſymptoms; ſuch as acute pain, and a full or hard pulſe indicated it."

(44) "In the courſe of the diſeaſe there frequently appeared unequivocal ſigns of a putrid tendency." Med. Commun. Vol. I. page 80.

given in full doſe, it would ſeem ſafer [for the reaſon ſuggeſted under the preceding head] to adminiſter them ſo as to keep the body regular, or gently lax(45); or to ſupply their place either by clyſters(46), or emetics in the manner next to be mentioned.

3. VOMITS. Whenever there appears to be an inflammation of the lungs, which may be known by ſtitches or acute pains about the cheſt, theſe would be improper, as tending to give exquiſite and unneceſſary pain; and would endanger the rupture of a blood veſſel in the lungs, with all its bad conſequences,—without any probability of their proving ſerviceable. An *early exhibition* of full vomiting is very proper, in order to bring on a determination of the fluids to the ſurface of the body (47), which not only contributes to the *expulſion of the exciting cauſe* (48), and thereby preventive of an inflammation of the

(45) "Gentle laxatives were frequently uſed with advantage in the beginning of the complaint, eſpecially where there was a diſpoſition to coſtiveneſs, ſtrong purges do not appear to have been often given; and from general obſervation reſpecting the effects of bleeding, there is reaſon to think, they would in moſt caſes have been prejudicial." Med. Commun. Vol. I. p. 38.

(46) Wallis's Sydenham, Vol. II. page 337.

(47) Emetics exhibited upon the *firſt attack* [of the influenza] were evidently of uſe in relieving the head and breaſt." Lond. Med. Trans. Vol. 2. page 73. "They do not appear to have been very generally uſed [in the epidemical catarrh of 1782], but all who did employ them, concur in opinion, that they were of great ſervice, not only where there was reaſon to ſuſpect an accumulation of mucus in the bronchial ramifications, but alſo where they were given chiefly with a view to aſſiſt in producing a ſpeedy and copious perſpiration." Med. Communications, Vol. I. page 25.

(48) "Before the miaſma was fixed and propagated in the body, it was wholly carried off in ſeveral patients who kept in bed immediately after feeling the firſt attack, by a large perſpiration. Other ſpontaneous evacuations, by vomiting, looſeneſs or urine were leſs frequent, and did not ſeem to procure ſuch immediate, and great relief, unleſs they were followed by a ſweat."

Dr. Reimarus, Hamburgh. See Med. Commun. vol. I. p. 30.

lungs, &c. but often brings on a ſalutary perſpiration over the whole body; a copious ſecretion of mucus in the bronchiæ, fauces and noſe; and in this, anticipating or aſſiſting nature in her own way in bringing on a mild ſolution of the diſeaſe. It will therefore be beſt to limit *full vomiting* to the firſt ſtage of the complaint, and afterwards to ſupply its place by emetic medicines in ſmall doſes, frequently repeated, ſo as to keep up a pretty conſtant nauſea: for which purpoſe the gum ammoniac, antimonial wine, or emetic tartar is uſually preſcribed; and, though any one of them will anſwer tolerably well, the latter being copiouſly diluted, and frequently given in ſmall quantity, ſeems to have been attended with the happieſt effects, by rendering the bowels moderately open, and keeping up a gentle diaphoreſis(49). "This medicine adminiſtred in this manner [in the opinion of Doctor James Carmichael Smyth], had alſo a very remarkable effect in bringing on a remiſſion of the febrile ſymptoms, and in accelerating the termination of the diſeaſe."

However the *long continued uſe* of antimonials (50), or of nauſeating medicines of any kind, is apt at length, to debilitate the ſtomach ſo much as to render it in a good meaſure, incapable of retaining food, drink, or medicine; and this, perhaps, at a time when they are moſt needful. Theſe medicines likewiſe ſoon looſe their ſudorific power over the ſyſtem, and, as Dr Donald Monro aſſures us, even James's celebrated febrifuge powders have occaſioned ſuch a purging as to *haſten the patients to their graves*.

(49) "All attempts to *force ſweat* appear to have done more harm than good." Lond. Med. Trans. Vol. 2. page 72.

(50) "Large doſes of antimonials, or even ſmaller ones too frequently repeated, have ſometimes brought on evacuations, which entirely ſunk the patient." Lind on hot climates, page 261. And,

On the ſame ſubject, ſee Dr. D. Monro's Obſerv. vol. 2. p. 13 and 15—alſo Dickinſon on fevers p. 115.

The MISTURA MUCILAGINOSA (51) which is very frequently uſed in the Philadelphia Diſpenſary, is an agreeable and efficacious medicine in moſt catarrhal complaints; particularly where the cough is very diſtreſſing, and the neceſſary evacuations have been previouſly made. A table ſpoonful every two or three hours, according as the cough, anxiety, morbid watchfulneſs, &c. are urgent, is the manner in which this excellent remedy is uſually preſcribed. This mixture poſſeſſes ſeveral advantages, as well from the medicines which it contains, as the due proportion in which they enter into its compoſition, and the facility with which its powers may be increaſed without becoming much [if at all] leſs agreeable to the patient. The tincture of opium will render it more anodyne in a given quantity, a few grains of tartar emetic will correct the conſtipating qualities of this, and the whole mixture is thereby more or leſs laxative; whilſt their joint efficacy renders it more powerfully diaphoretic, with ſcarcely any alteration in its taſte, or diminution of its demulcent quality. But I have ſeldom ſeen it neceſſary either to vary the form of the preſcription, or give any other opiate (52); and I have obſerved at leaſt a thouſand inſtances ſince I attended the practice of the above inſtitution,—where the uſe of it was attended not only with evident relief, but [as the patients ſometimes emphatically expreſſed it] with "*bleſſed effects.*"

4. LOW DIET. Animal food ſeems to be very hurtful, eſpecially in the beginning of the diſeaſe; it ought therefore to be immediately laid aſide, and a light vegeta-

(51) R. Elixir: Paregoric: ℥j Vini Antimonial: ℥ſs Mucilag: Gum: Arabic ℥j:—Succ: Glycirrh: aa ℥ſs—Aquæ Fontis ℥viij M.

(52) "Opiates were a common remedy with moſt phyſicians, and they all agree in teſtifying their great uſe; particularly in mitigating the cough, which was in many caſes the moſt troubleſome and tedious ſymptom of the diſeaſe." Med. Commun. Vol. I. page 38.

ble or milk diet ſubſtituted in its ſtead (53). Dr. Rotherham is of opinion that "an abſtinence from all food would accelerate the cure;" and poſſibly, in ſome caſes, it might have this effect, yet as the preſcription ſeems a harſh one, and might in many perſons induce an irritation from hunger much more dangerous than the ſtimulus of a ſmall quantity of bland aliment in the ſtomach, it would be preferable to allow as much as would allay this ſenſation. Low diet has its limits; nor ſhould it be much longer perſiſted in than whilſt the inflammatory diatheſis is preſent in the ſyſtem.

A gentleman of the faculty in this city, who had the influenza in the fall of 89, ſtrictly adhered to the antiphlogiſtic regimen, and to his aſtoniſhment perceived the diſeaſe, inſtead of abating, to grow worſe: he reverſed the plan, lived generouſly, and got well(55).

5. DILUENT DRINKS. Of whatever kind the fever may be, theſe ſeem to be indicated. There is a great variety of them, and but little preference; as any of them will anſwer ſufficiently well, if a due attention be paid to their temperature and quantity.

As a general rule, *tepid drinks* (56) would ſeem to

(53) What Doctor Sydenham has beautifully ſaid, when pointing out the cure of the Quinzy, is ſtrictly applicable here, viz. "Meats of every kind, and likewiſe broths prepared from them, are *ſacred*, and muſt not be touched."

(55) "A generous diet [in ſome inſtances] was highly conducive to a more ſpeedy recovery, and many bore a more liberal uſe of wine than is generally given in catarrhs from cold." Lond. Med. Mem. V. 2. p 468.

(56) "The drinking frequently of *tepid*, emollient liquors is a kind of internal relaxing fotus to the prime viæ, præcordia, &c. which is of no ſmall conſequence, eſpecially in inflammations of the lungs, pleura, &c. This was the practice of the antients, who gave little elſe in fevers, beſides their watery diluents, ptiſan or barley-water, hydromel, oxymel, &c." Huxham on fevers page 245—See Doctor Wm. Fordyce's inquiry into the cauſes, &c. of fevers, pages 90, and 180.

be ſafeſt, as cold ones ſometimes do injury in inflammations of the lungs, and in ſome inſtances, might check or prevent a ſalutary perſpiration: but as there are certainly ſome exceptions to this rule, much muſt be left to the ſagacity of the phyſician (57).

Pure water, whey, barley-water, water acidulated with currant-jelly, vinegar, lime-juice, &c. with or without ſweetening, are all very proper drinks in this diſeaſe. Whilſt an inflammatory diatheſis prevails in the ſyſtem, a little nitre or ſome ſuch neutral ſalt may be diſſolved in one or other of theſe drinks, and given with ſafety and advantage. Typhus, and typhoid caſes require diluents alſo; but occaſionally, the patients may be allowed wine-whey, wine and water, veal-broth, chicken broth, and pure unmixed wine, according to circumſtances (58).

6. BLISTERS are frequently neceſſary in this complaint, and peculiarly ſo when pleuritic or peripneumonic ſymptoms become violent; in which caſe, they are to be placed as directly over the part affected as poſſible (59). When the influenza is attended with ophthalmies, head-ache, or acute pains in the eye-balls, bliſters applied over the temporal arteries, to the nape of the neck, or behind the ears, are of *eminent ſervice* (60).

(57) Brydone ſays the Italians uſe ice and ice-water with great advantage in inflammations of the lungs; but I have not learnt that this practice has been imitated in America, and until experience ſhall have demonſtrated more generally its ſafety, we ſhould venture on it with ſome heſitation.

(58) "Proper dilution is unqueſtionably uſeful in all fevers, but certainly ſome require more than barley-water, and lemonade." Huxham on fevers, page 245. See alſo Lond. Med. Mem. vol. 2. page 459.

(59) "Bliſters ſeldom failed to relieve the head, and to prevent too great a defluxion on the lungs." Lond. Med. Tranſact: vol. 3. page 73.

(60) There has been much contrariety of opinion with regard to bliſters: ſome exclaim againſt frequent, and, as they

7. The PEDILUVIUM ſhould never be omitted in the incipient ſtage of this, or of any other catarrhous affection. The patient may ſit in water of a temperature ſomewhat higher than that of his own body (61), from five to thirty or forty minutes; taking, at the ſame time, or very ſhortly after, a few drops of antimonial wine in a little weak tea. The eaſe with which this remedy may be procured, being within the reach of every body, the ſuddenneſs of its effects, and the little danger attendant on its application, are no ſmall recommendations in its favour. According to Dr. Hamilton, " it determines to the ſurface, encourages a larger ſhare of blood from the head and ſuperior parts, to the lower; is generally followed by ſleep, relieves delirium, moderates the cough, and removes ſickneſs at the ſtomach, from the great ſympathy between this organ, and all the parts of the body; but eſpecially with the ſurface(62)."

8. WARM AQUEOUS VAPOURS frequently received into the lungs by the breath, conſtitute a remedy of immenſe conſequence in this diſeaſe. Many perſons fancy that a little vinegar added to the warm water, improves its virtues conſiderably, the truth of which however has been queſtioned; nevertheleſs, as the vapour, in conſequence of this addition, feels more grateful to the lungs and fauces of ſome people, as it can do no injury, and as it may coincide with the wiſhes of the patients, it will

term it, indiſcriminate uſe; others forbid the application of them where there is a putrid tendency only; others admit them, but object to certain kinds in certain kinds of fevers, — as for inſtance cantharides in the jail fever, where they would prefer bliſtering with the ſteams of hot-water, or ſinapiſms of vinegar, leaven, &c. Whilſt others again, the moſt celebrated of whom is the late Doctor Brown, condemn their uſe in all caſes whatever.

(61) See Huxham on fevers, at page 12.

(62) See his remarks on the influenza of 1782, in the ſecond volume of the Lond. Med. Memoirs.

ſometimes become a duty to preſcribe in this way. The method of uſing or of applying the vapour, is of very little importance; a baſon filled with hot water, and the face placed over it, or the ſteam received through an inverted funnel, will anſwer as well as, and perhaps better than Mudge's inhaler.

Directions to Nurſes, and attendants of the ſick.

As the influenza is a febrile diſeaſe, and a contagious one alſo, it will be proper to pay attention to the air of the patient's chamber; as the ſalubrity of this, which depends no leſs on frequent ventilation, than upon univerſal cleanlineſs, accelerates the cure, and is preventive of relapſes. Nor is the temperature of it to be neglected; for although cool air is undoubtedly uſeful in fevers, yet it is not leſs ſo in many caſes, to ſupport that degree of warmth which may promote a proper quantity of perſpiration. A fire-place is of great uſe in purifying the air, and in ſome meaſure regulating the temperature of it, and where a choice can be had, the ſick ought never to be put in a room in which there is not ſuch a ventilator. Let me repeat it, every thing about the patient ſhould be kept clean, and his linen frequently changed; his bed placed ſome feet from the wall, and no curtains ſuffered to invelope it; all unneceſſary furniture ſhould be removed, and no wearing apparel permitted to hang round the room. If at any time it ſhould be found unadviſeable to change the air of his apartment by opening the windows, doors, &c. it will be right to impregnate it with the ſteams of vinegar(63), or with the fumes which ariſe from brown ſugar when thrown on a few coals. The preſent ſtate of philoſophy will not enable us to explain ſatisfactorily how the healthy change is produced;—whe-

(63) "Steams of vinegar reſiſt putrefaction by impregnating the air with it's powers." Fordyce on fevers, page 18.

ther the ſteams of the vinegar, or the fumes of the ſugar neutralize, or decompoſe the morbid impurities iſſuing from the ſick,—or in ſhort how it is effectuated: but it is well we are *certain of the fact*, though we ſhould forever be ignorant how it obtains.

Of Prophylactics

in the influenza little can be ſaid with certainty, as we are yet ſo totally ignorant of the true nature of the materies morbi; but it may perhaps be proper to obſerve that *equanimity*, and *temperance in eating and drinking*, are amongſt the beſt preventatives of all diſorders. Temperance is too indefinite a term, however, as that which is no more than *ſtrictly neceſſary* to one perſon, might to another be a very dangerous exceſs; for which reaſon more ought to be left to the feelings of the perſon than to the judgment of the phyſician. When an epidemic rages, and indeed at all times, changes in the manner of living are dangerous; but eſpecially ſo, if they be not gradually made, "leſt by the change ſome innovation ſhould happen in the body," as ſaith the great Hippocrates.

Of the Prognoſis.

The influenza has brought on death in perſons previouſly very much debilitated, and paved the way for it in ſome inſtances by diſpoſing to dropſy, conſumption of the lungs, &c. Yet the united teſtimony of all the writers upon this ſubject proves that it is ſeldom either obſtinate or fatal(64): and as death or recovery in this diſeaſe is marked by no peculiar ſymptom (that I know of) it has

(64) See Med. Commun. vol. 1. page 40. The termination or conſequences of this diſorder were like every other part of it, extremely various."

appeared to be useless to enter into a detail of doubtful circumstances. There is no part of our medical researches accompanied with so much uncertainty as is the prognosis of disease; for, in the language of the poet, "*shadows, clouds,* and *darkness* rest upon it."

I shall conclude this essay with remarking that, although the influenza is, as mentioned above, for the most part a mild disease, still it is not always without danger; that if there be a risk in leaving our constitutions to struggle with the complaint, there is as much—nay, more to be apprehended from injudicious treatment; that while in some cases we fancy we are assisting nature, we should be careful lest we be found contending with her to the great hazard of the patient; that although medicines become the props of sinking life when judiciously administred, yet if dealt out by the rash and the unskilful it is justly to be feared they will be used improperly, in which case they are as dreadful as the *sword of the destroying angel.* By this I mean not to insinuate, that the faculty alone are to dispense medicines,—far from it; but would wish to suggest, in the cause of humanity, the necessity of caution, as "bold practice" borders upon cruelty.

FINIS.